

CROSS-REFERENCE TO RELATED APPLICATIONS

This is a continuation application of Patent App. 056,501, filed May 3, 1993, which was a continuation of Patent App. 849,226, filed March 10, 1992, which was a continuation of Patent App. 588,126, filed Sept. 25, 1990, which was a continuation of Patent App. 096, 096, filed Sept. 11, 1987, which was a continuation-in-part of Patent App. 829, 531, filed Feb. 14, 1986, which was a continuation of Patent app. 317,519, filed Nov. 3, 1981.

BACKGROUND OF THE INVENTION

The invention relates to an integrated system of programming communication and involves the fields of computer processing, computer communications, television, radio, and other electronic communications; the fields of automating the handling, recording, and retransmitting of television, radio, computer, and other electronically transmitted programming; and the fields of regulating, metering, and monitoring the availability, use, and usage of such programming.

For years, television has been recognized as a most powerful medium for communicating ideas. And television is so-called "user-friendly"; that is, despite technical complexity, television is easy for subscribers to use.

Radio and electronic print services such as stock brokers' so-called "tickers" and "broad tapes" are also powerful, user friendly mass media. (Hereinafter, the electronic print mass medium is called, "broadcast print.")

But television, radio, and broadcast print are only mass media. Program content is the same for every viewer. Occasionally one viewer may see, hear, or read information of specific relevance to him (as happens when a guest on a television talk show turns to the camera and says, "Hi, Mom"), but such electronic media have no capacity for conveying user specific information simultaneously to each user.

For years, computers have been recognized as having unsurpassed capacity for processing and displaying user specific information.

But computer processing is not a mass medium. Computers operate under the control of computer programs that are inputted by specific users for specific purposes, not programs that are broadcast to and
5 executed simultaneously at the stations of mass user audiences. And computer processing is far less user friendly than, for example, television.

Today great potential exists for combining the capacity of broadcast communications media to convey
10 ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences -- e.g., "Stock prices
15 rose today in heavy trading," -- with information of specific relevance to each particular user in the audience -- e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)

20 Unlocking this potential is desirable because these new media will add substantial richness and variety to the communication of ideas, information and entertainment. Understanding complex subjects and making informed decisions will become easier.

25 To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate -- television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print,
30 etc.

But it requires much more.

To unlock this potential fully requires a system with efficient capacity for satisfying the demands of subscribers who have little receiver
35 apparatus and simple information demands as well as subscribers who have extensive apparatus and complex demands. It requires capacity for transmitting and organizing vastly more information and programming than